



6CL6
Description and Rating
PENTODE

The 6CL6 is a miniature power pentode designed primarily for use as the video output amplifier in television receivers. The tube exhibits high transconductance, high power sensitivity, and low interelectrode capacitances. These characteristics make the 6CL6 suitable for driving large television picture tubes at low distortion levels. The tube is also useful as a wide-band amplifier in industrial and laboratory equipment.

GENERAL

Cathode - Coated Unipotential
Heater Voltage, A-C or D-C 6.3 Volts
Heater Current 0.65 Ampere
Envelope - T-6½, Glass
Base - E9-1, Small Button 9-Pin
Mounting Position - Any

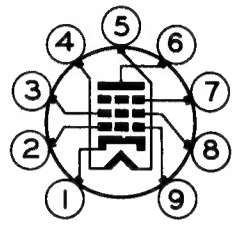
Direct Interelectrode Capacitances*
Grid-Number 1 to Plate, maximum 0.12 μμf
Input 11 μμf
Output 5.5 μμf

MAXIMUM RATINGS

DESIGN-CENTER VALUES
Plate-Supply Voltage 300 Volts
Plate Voltage 300 Volts
Suppressor Voltage 0 Volts
Screen-Supply Voltage 300 Volts
Screen Voltage - See Screen Rating Chart
Positive D-C Grid-Number 1 Voltage 0 Volts
Negative D-C Grid-Number 1 Voltage 50 Volts
Plate Dissipation 7.5 Watts
Screen Dissipation 1.7 Watts
Heater-Cathode Voltage
Heater Positive with Respect to Cathode 90 Volts
Heater Negative with Respect to Cathode 90 Volts
Grid-Number 1 Circuit Resistance
With Fixed Bias 0.1 Megohm
With Cathode Bias 0.5 Megohm
Bulb Temperature at Hottest Point +200 Centigrade

* Without external shield.

BASING DIAGRAM

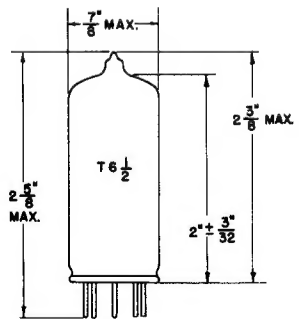


RTMA 9BV
BOTTOM VIEW

TERMINAL CONNECTIONS

- Pin 1 - Cathode
- Pin 2 - Grid Number 1
- Pin 3 - Grid Number 2 (Screen)
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Plate
- Pin 7 - Internal Shield and Grid Number 3 (Suppressor)
- Pin 8 - Grid Number 2 (Screen)
- Pin 9 - Grid Number 1

PHYSICAL DIMENSIONS



RTMA 6-3

CHARACTERISTICS AND TYPICAL OPERATION

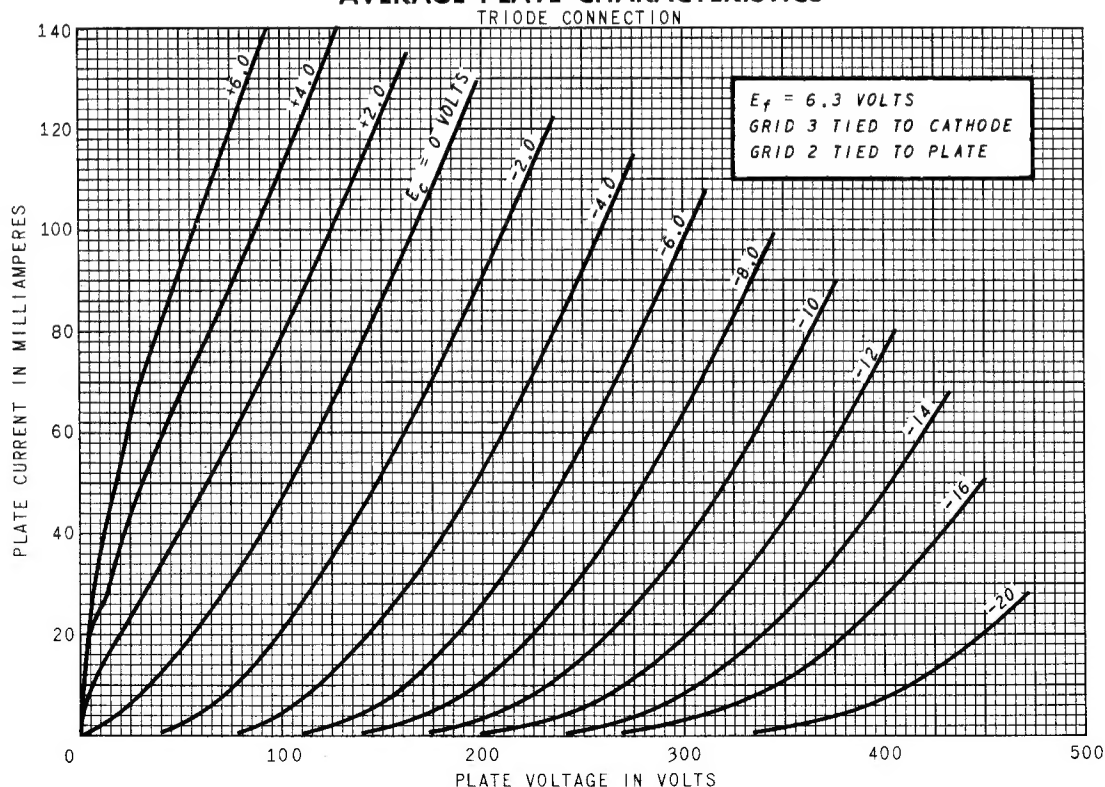
CLASS A₁ AMPLIFIER

Plate Voltage	250	Volts
Suppressor - Connected to Cathode at Socket		
Screen Voltage	150	Volts
Grid-Number 1 Voltage	-3.0	Volts
Peak AF Grid-Number 1 Voltage	3.0	Volts
Plate Resistance, approximate	150000	Ohms
Transconductance	11000	Micromhos
Zero-Signal Plate Current	30	Milliamperes
Maximum-Signal Plate Current	31	Milliamperes
Zero-Signal Screen Current	7.0	Milliamperes
Maximum-Signal Screen Current	7.2	Milliamperes
Load Resistance	7500	Ohms
Total Harmonic Distortion, approximate	8	Percent
Maximum-Signal Power Output	2.8	Watts
Grid-Number 1 Voltage, approximate, $I_b = 10$ Microamperes	-14	Volts

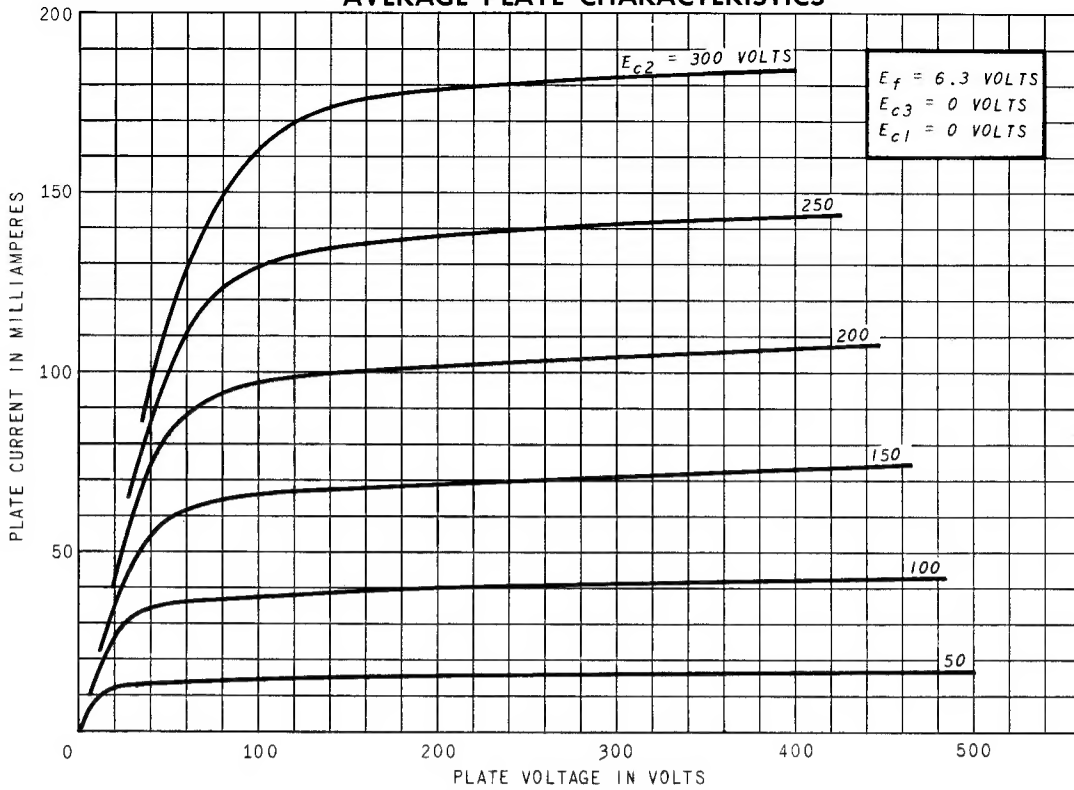
VIDEO AMPLIFIER, 4 MEGACYCLE BANDWIDTH

Plate-Supply Voltage	300	Volts
Suppressor - Connected to Cathode at Socket		
Screen-Supply Voltage	300	Volts
Screen Resistor	24000	Ohms
Grid-Number 1 Voltage	-2	Volts
Grid-Number 1 Resistance	0.1	Megohm
Grid-Number 1 Signal Voltage, Peak-to-Peak	3.0	Volts
Zero-Signal Plate Current	30	Milliamperes
Zero-Signal Screen Current	7.0	Milliamperes
Load Resistance	3900	Ohms
Voltage Output, Peak-to-Peak	132	Volts

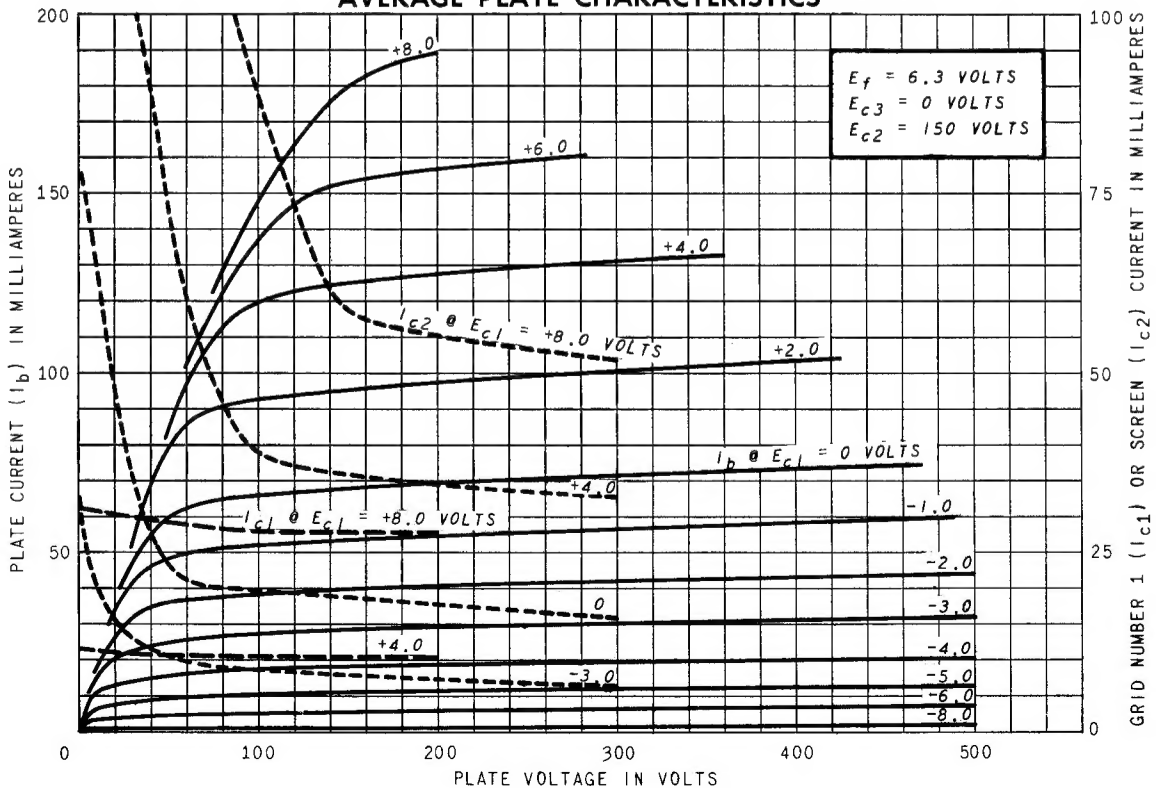
AVERAGE PLATE CHARACTERISTICS



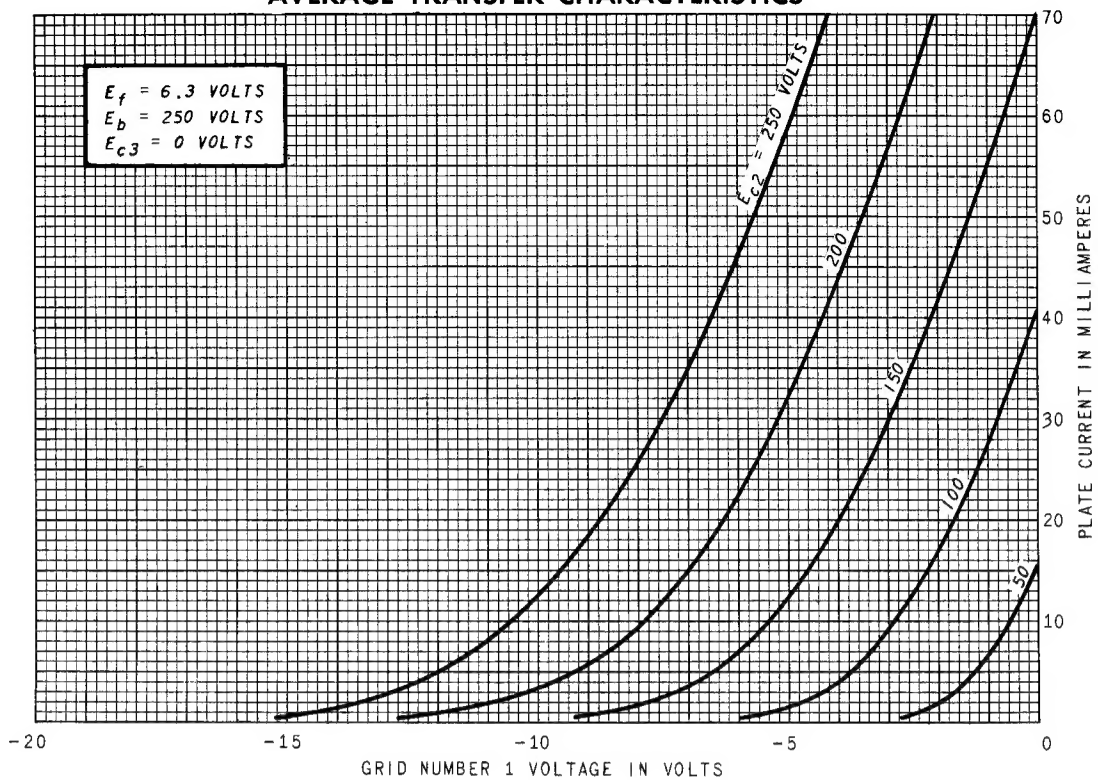
AVERAGE PLATE CHARACTERISTICS



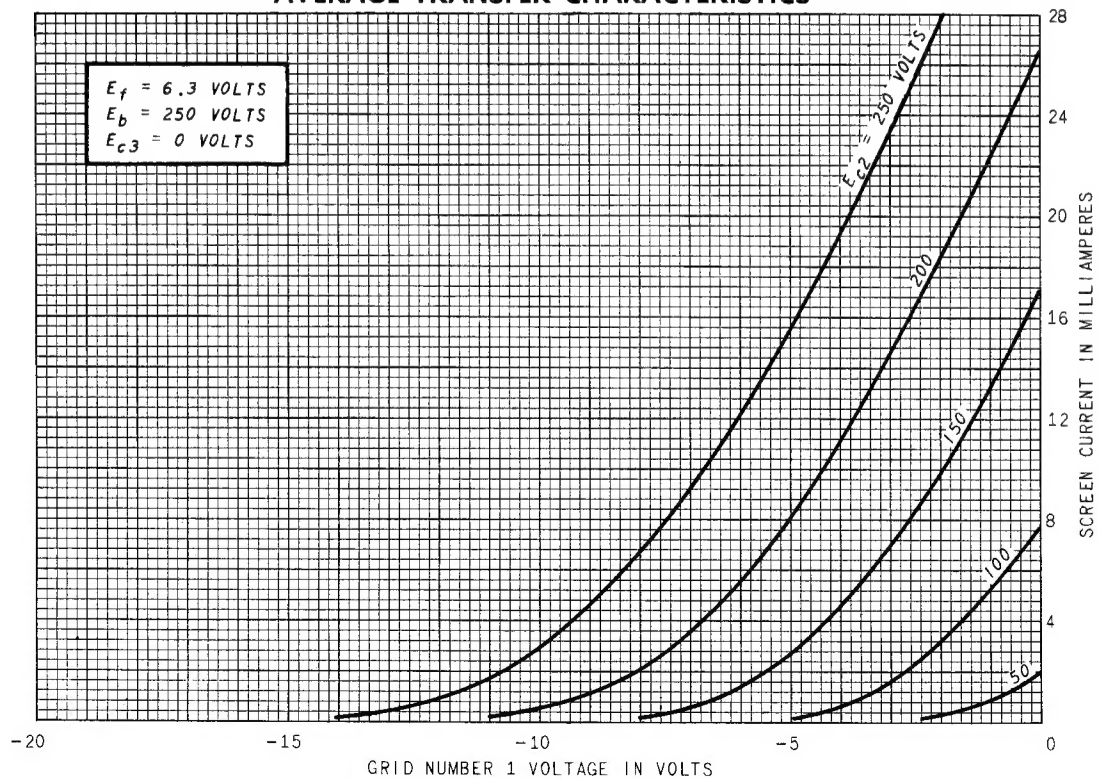
AVERAGE PLATE CHARACTERISTICS



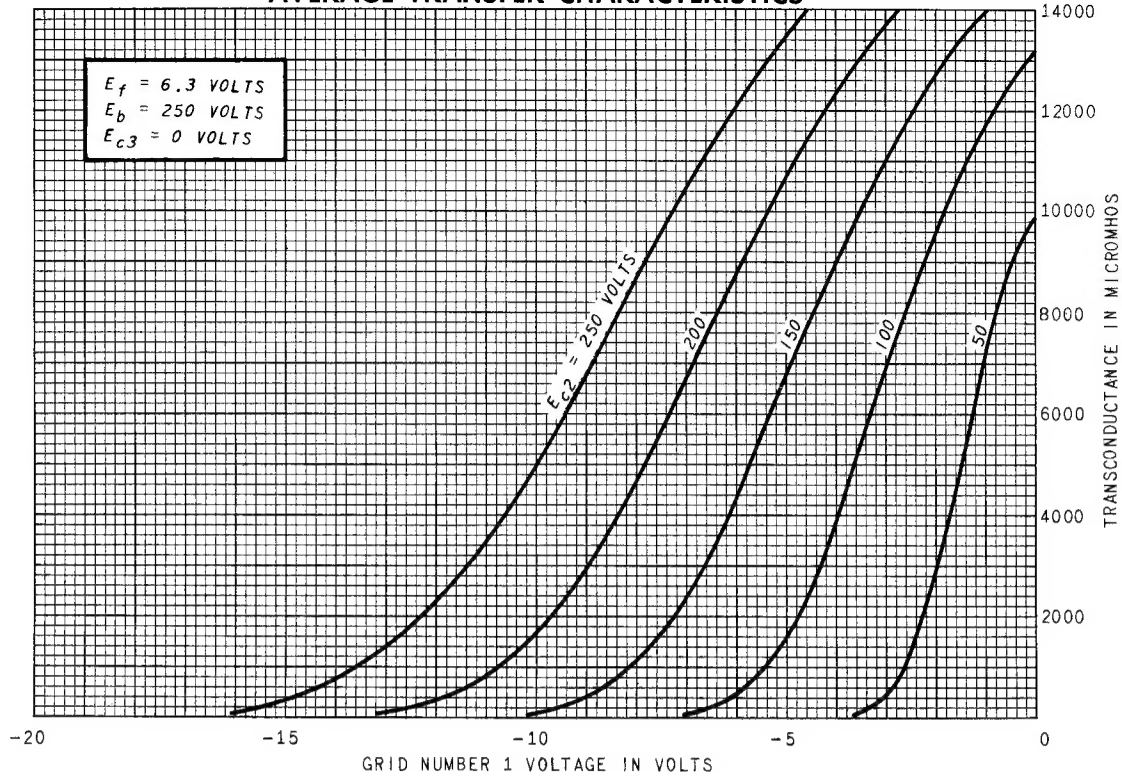
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



SCREEN RATING CHART

